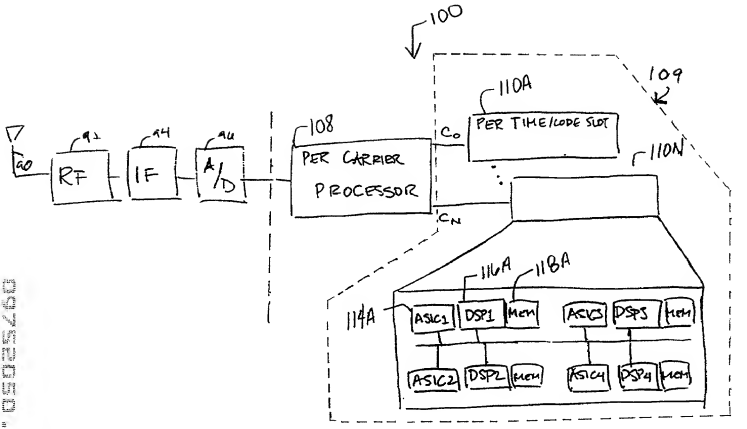

FIGURE 1
(Prior Art)

09/528,760 .12621

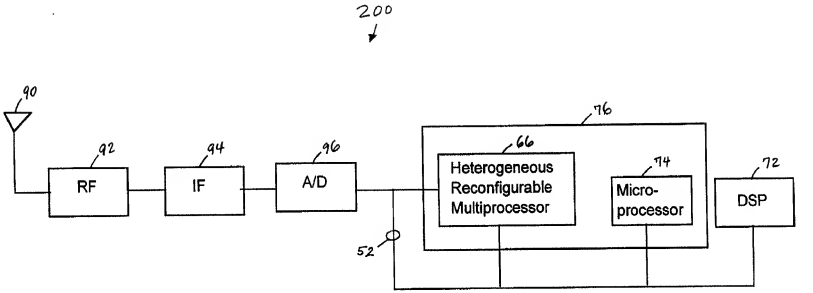

FIG. 2

006227 050325.60

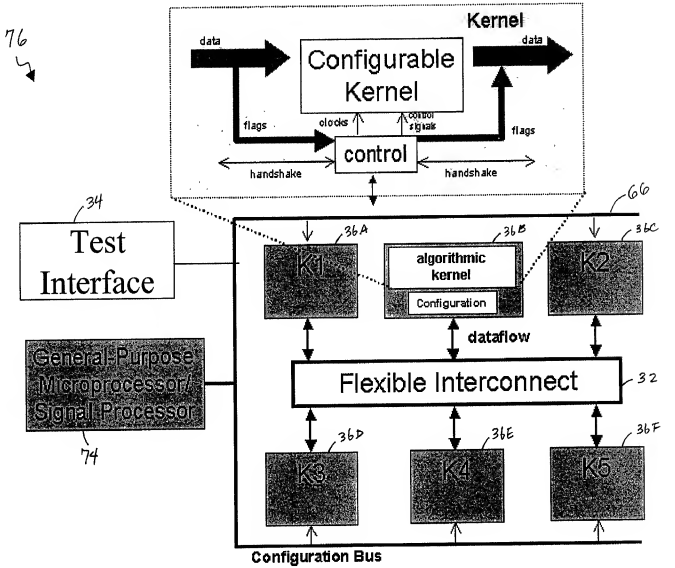

FIG. 3

08622T 050252A0

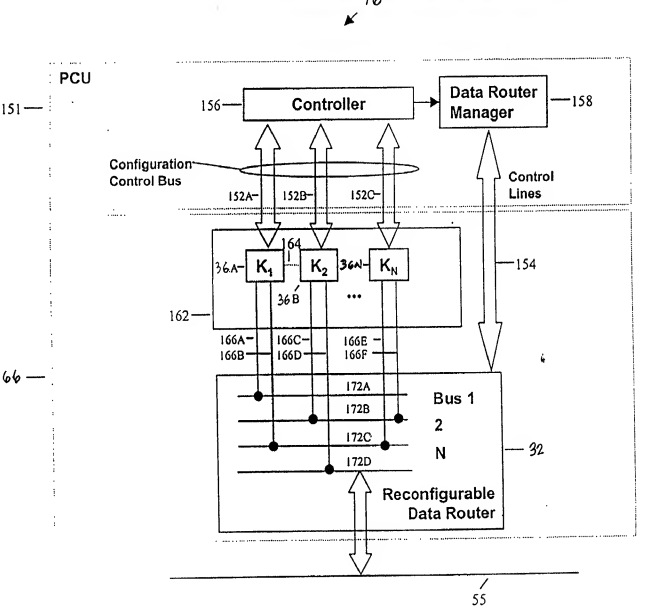

FIG. 4

09252960 .12290

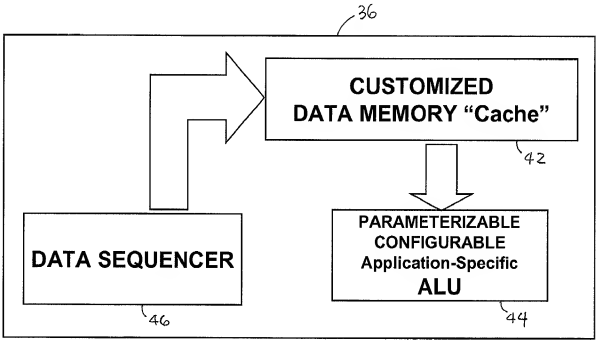

FIG. 5

08622T 05025260

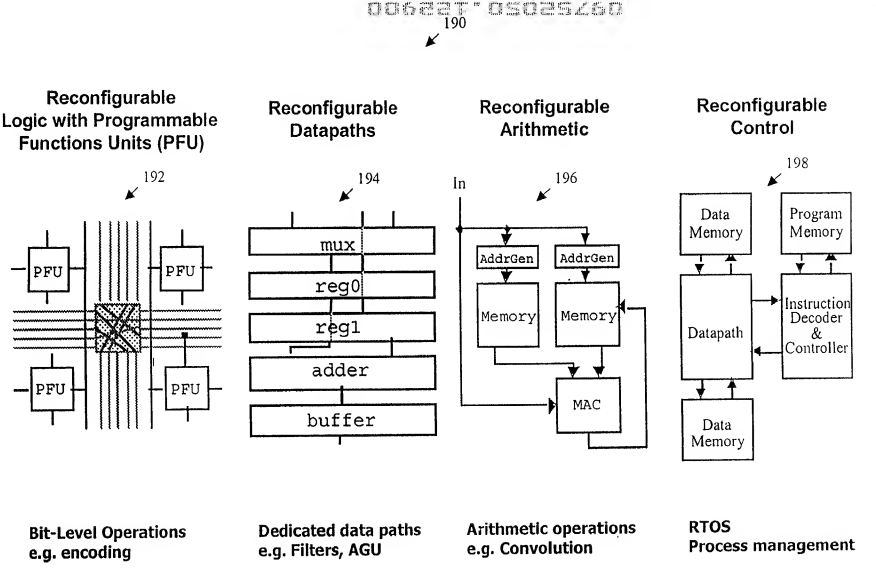

FIG. 6

006227 "050252/60

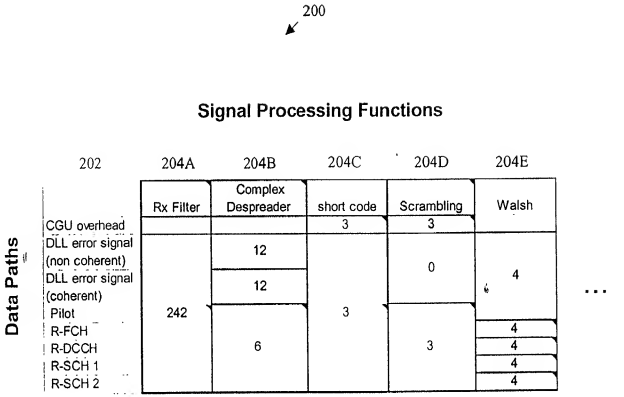

FIG. 7

08622T*0802S760

220

	TDMA				CDMA				
	IS136	GSM	GPRS	EDGE	IS-95B	IS-2000	WCDMA-FDD	GPS	Globalstar
Parameter Estimation Functions									
LMS Channel Estimator		x	x	x					
Windowed Average Energy Estimator	x	x	x	x	x	x	x		
ML Symbol Timing Estimator	x	x	x	x	x	x	x	x	x
ML Carrier Phase Estimator	x	x	x	x	x	x	x	x	x
PN Correlator					x	x	x		
MatchedFilter							x	x	x
Interference Energy Estimator						x	x		

FIG. 8

09622[illegible]09025260

240

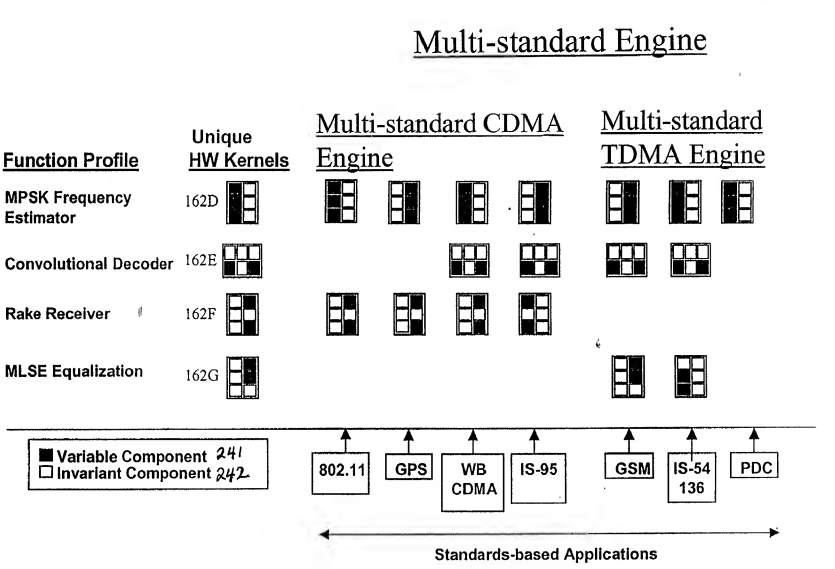

FIG. 9

D06221 "050252/60

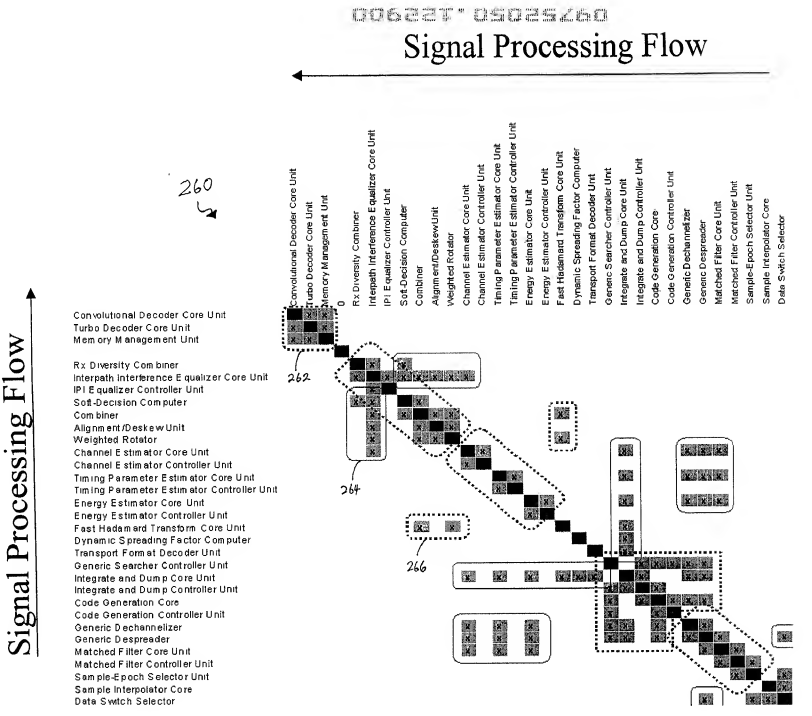

FIG. 10

D06227 050252.60

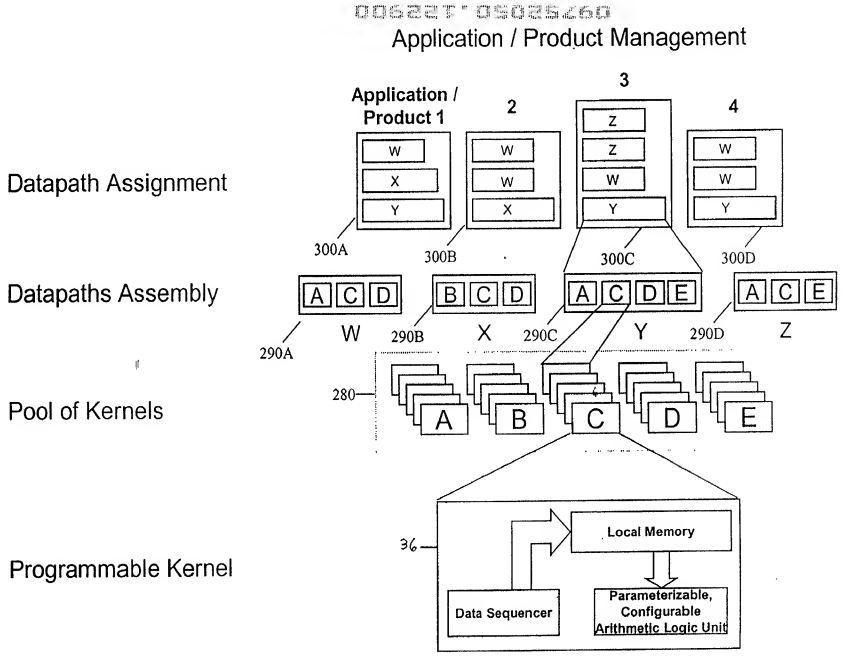

FIG. 11

0062RT'0502S260

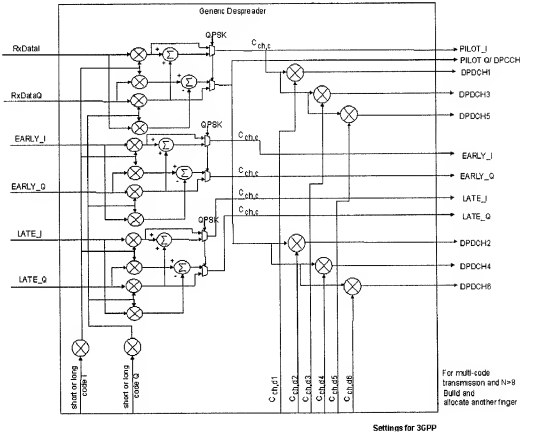

FIG. 12

0062ET 0602SL60

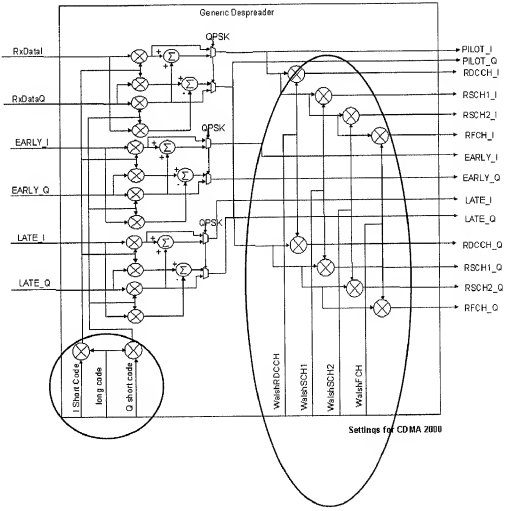

FIG. 13

US 6,823,027 B2

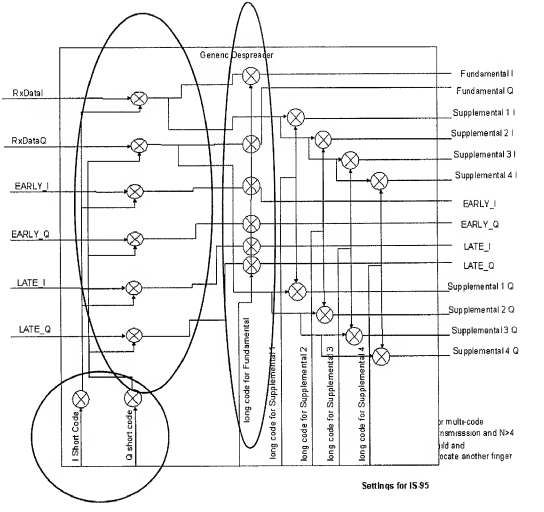

FIG. 14

CDMA Computation Unit Library	
Front End Processing Sample Interpolation	*Parameter Estimation* Energy Estimator Timing Parameter Estimator Channel Estimator
Chip Rate Processing Sample Epoch Selection Matched Filter Generic Despreader Generic Dechannelizer Code Generation Unit Integrate and Dump Generic Searcher Control	*Channel Element Processing* Alignment/Deskewing Combiner Soft Decision Computer Interpath Interference Equalizer Receive Antenna Diversity Combiner
Symbol Sequence Processing Transport Format Decoder Dynamic Spreading Factor Computer Fast Hadamard Transform Rotator/Squarer	*Interleaving* Deinterleaver Controller *Channel Decoding* Turbo Decoder Convolutional Decoder

0062270502560

FIG. 15

TDMA Computation Unit Library	
TDMA Modem Transmitter Puplse-shaping Multiplexing	*TDMA Modem Receiver* Front-end Filtering Adaptive Demodulation
Link Adaptation (AMR) Antenna Transmit Diversity	Synchronization Adaptive Parameter Estimation
Channel Decoder Reed Solomon Codes Decoding Fire Codes Decoding Decryption Deinterleaving	Equalization Diversity Combining Link Adaptation
	Channel Encoder Encoding Encryption Interleaving

FIG. 16

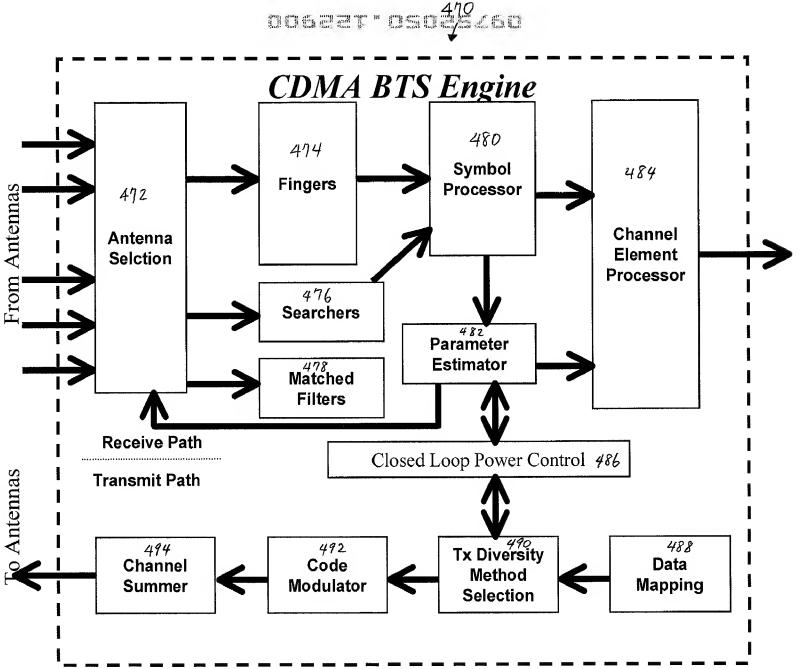
470
CDMA BTS Engine
From Antennas
472
Antenna Selction
474
Fingers
480
Symbol Processor
484
Channel Element Processor
476
Searchers
482
Parameter Estimator
478
Matched Filters
Receive Path
Transmit Path
Closed Loop Power Control 486
To Antennas
494
Channel Summer
492
Code Modulator
490
Tx Diversity Method Selection
488
Data Mapping

FIG. 17

006227 050357260

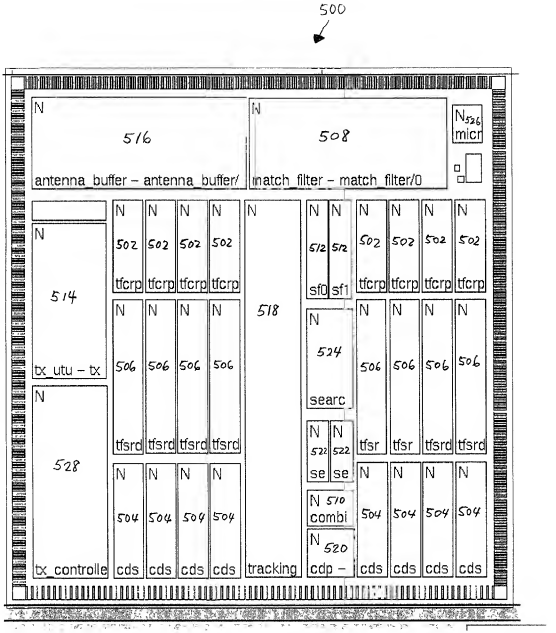

FIG. 18